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Energy Situation Analysis Report

Last Updated: April 1, 2003
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Latest World Oil Market Developments

- As of 7:45 am Tuesday, the near-month WTI futures contract was at $30.30 per barrel in overnight ACCESS trading, down $0.74 per barrel from yesterday's closing price, on news that Nigeria's largest union had canceled a strike scheduled to start today.
- The near-month (May) West Texas Intermediate (WTI) futures contract settled at $31.04 per barrel on Monday (3/31), up $0.88 per barrel from Monday, on concerns over the pace of war in Iraq, plus continued violence and a significant (800,000-barrels-per-day) oil supply disruption in Nigeria. more...

Production/Export/Infrastructure Developments

IRAQ: U.S. and Kuwaiti oil well firefighters reportedly tried but failed on Monday (3/31) to extinguish the remaining two fires at oil wells in the southern Rumaila field. Water shortages and equipment failures were cited. The teams reportedly plan to try again today.

- Oil tanks at Ceyhan reportedly are nearly full now, forcing a slowdown of oil shipments there to a trickle. On Monday (3/31) a senior Turkish energy official said, "The flow may halt in two or three days unless loading starts because tanks are about to fill."
- Oil is not leaving Iraq's Persian Gulf port of Mina al-Bakr, although the tanker loading facility reportedly has not been damaged.
- Iraqi oil exports through the U.N. "Oil-for-Food" program are halted, with the last ship having loaded oil from storage tanks at Turkey's port of Ceyhan March 20.

PERSIAN GULF COUNTRIES:
Oil operations in Kuwait have not been disrupted, with no damage having been reported despite several Iraqi SCUD missile attacks on Kuwaiti territory. Kuwait also is reported to have restarted its 40,000-barrel-per-day, northern Ratqa field, an extension of Iraq's Rumaila field, which had been shut down in the weeks leading up to war.

- In fact, Kuwait reportedly is producing above its maximum sustainable capacity as a result of a decision to "surge" its oil production temporarily.
- Shell reportedly has halted production at Iran's 60,000-barrel-per-day Soroosh field in the northern Gulf due to safety concerns.
- No other problems in the Persian Gulf have been reported.

Non-GULF SUPPLY: Production in Nigeria remains constrained due to ethnic unrest in the Niger Delta. Thus far, the total amount of production disrupted is about 800,000 barrels per day, reducing production to 1.4 million barrels per day (MMBD).

- Early Tuesday (4/1), Nigeria' largest union -- the Nigeria Labour Congress -- called off a planned 3-day strike that had been scheduled to start today. Violence continued in the Niger Delta and spread to the Port Harcourt area over the past several days.
- Shell production is down 320,000 barrels per day. After reducing its Forcados output by 370,000 barrels per day on Monday (3/24), Shell on Tuesday raised its Bonny Light output by 50,000 barrels per day from other fields in Nigeria.
- Chevron has closed most of its operations on 3/26 and shut-in 440,000 barrels per day of Escravos production. Ethnic Ijaws have accused ChevronTexaco of allowing Nigerian security services to use the Escravos oil export terminal as a base. ChevronTexaco has insisted that it is not involved in the conflict.
- TotalFinaElf has shut down some operations.

Venezuelan production is widely believed -- by striking workers and independent analysts -- to be around 2.4-2.6 MMBD. State oil company PdVSA, on the other hand, estimates current production at around 3 MMBD, close to pre-strike output levels.

- Latest OPEC Production Table

Oil Supply Disruption Summary

- EIA is assuming that the flow of Iraqi oil exports has been stopped for the most part, resulting in a gross supply disruption of around 1.9-2.0 MMBD.
- Approximately 800,000 barrels per day of Nigerian production currently is shut in due to civil unrest.
- Combined with other lost oil production from Iran's Soroosh field, the gross oil supply disruption for these countries is estimated at 2.7-2.8 MMBD. Venezuela also continues to produce at levels below its November 2002 output, prior to strikes and unrest in that country. more...

Latest U.S. Petroleum Information

- With the high level of imports seen during the week ended March 22 (Venezuelan imports near normal), U.S. commercial crude oil inventories (excluding those in the Strategic Petroleum Reserve) increased by 3.7 million barrels. However, with crude oil refinery inputs relatively unchanged, inventories for distillate increased by 2.3 million barrels whereas gasoline inventories fell by 2.1 million barrels.
- The U.S. average retail price for regular gasoline fell last week for the second week in a row. Prices dropped by 4.1 cents per gallon as of March 31 to hit 164.9 cents per gallon, which is still 27.8 cents per gallon higher than a year ago. This is the largest one-week price decrease since prices fell by 4.4 cents on October 22, 2001. The decline reflects, in part, the reduction in crude oil prices recently. more...

Special Topics and Energy Supply Security

For background information concerning previous oil supply disruptions, energy supply vulnerability, infrastructure, and more. The current featured "special topics" provides a discussion of gasoline pricing behavior and a summary of Iraq's oil infrastructure.

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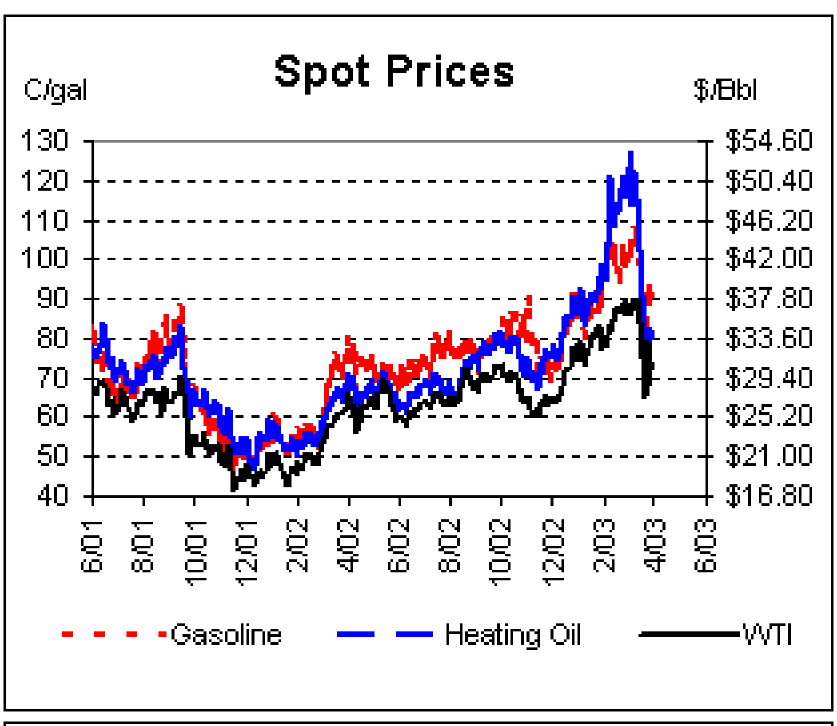
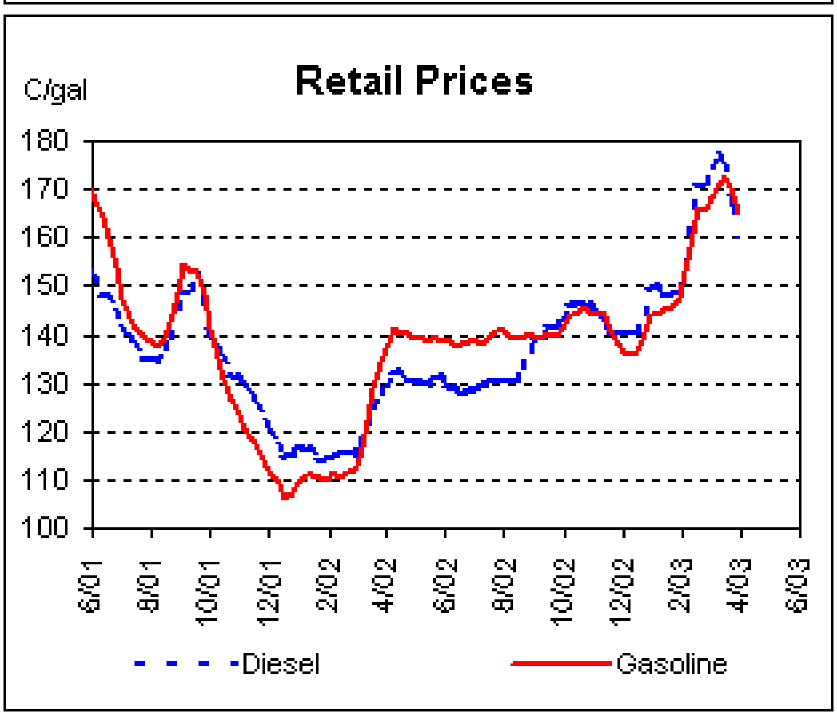
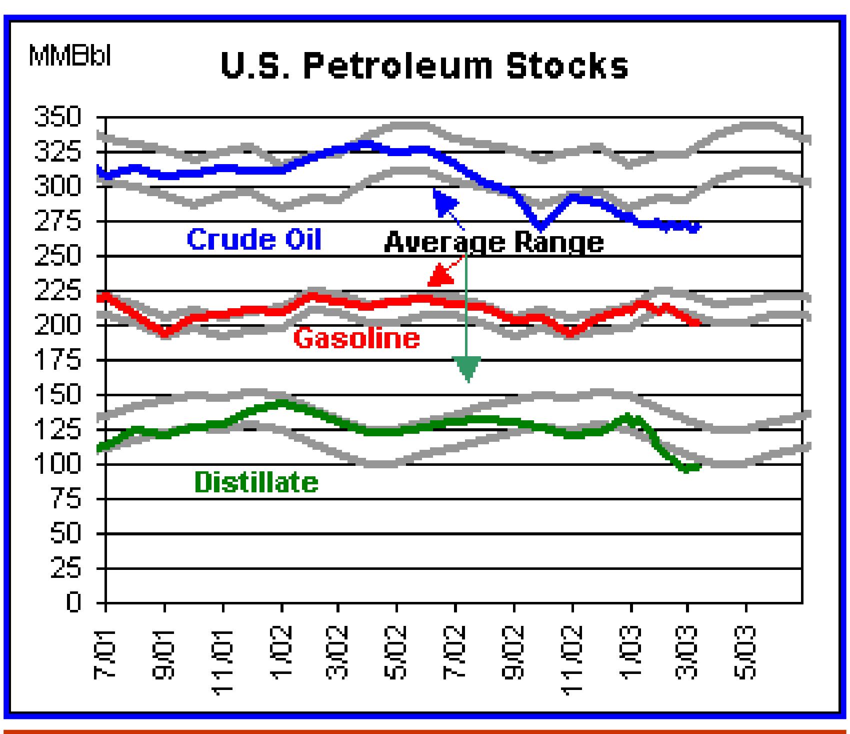
Energy Prices*

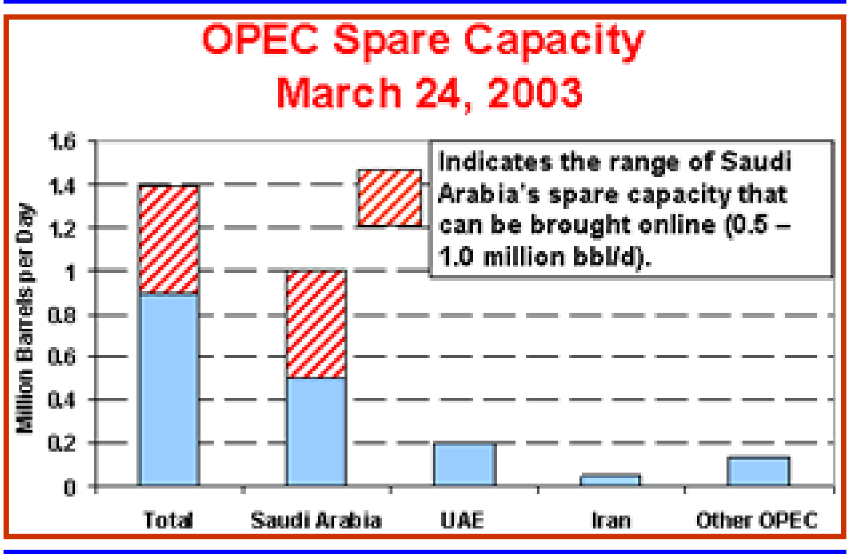
NYMEX Futures	3/31/03	3/28/03	Change	3/12/03
WTI ($/Bbl)	31.04	30.16	+0.88	37.83
Gasoline (C/gal)	94.44	95.39	-0.95	111.39
Heating Oil (C/gal)	79.24	83.25	-4.01	103.52
Natural Gas ($/MMBtu)	5.06	5.15	-0.09	5.87
Spot Prices				
WTI (Cushing, OK)	31.14	30.21	+0.93	37.87
Gasoline (NYH)	90.92	91.05	-0.13	105.08
Heating Oil (NYH)	79.62	82.08	-2.46	115.45
Jet Fuel (NYH)	80.12	83.70	-3.58	112.45
Natural Gas (Henry Hub)	5.01	5.06	-0.05	5.80

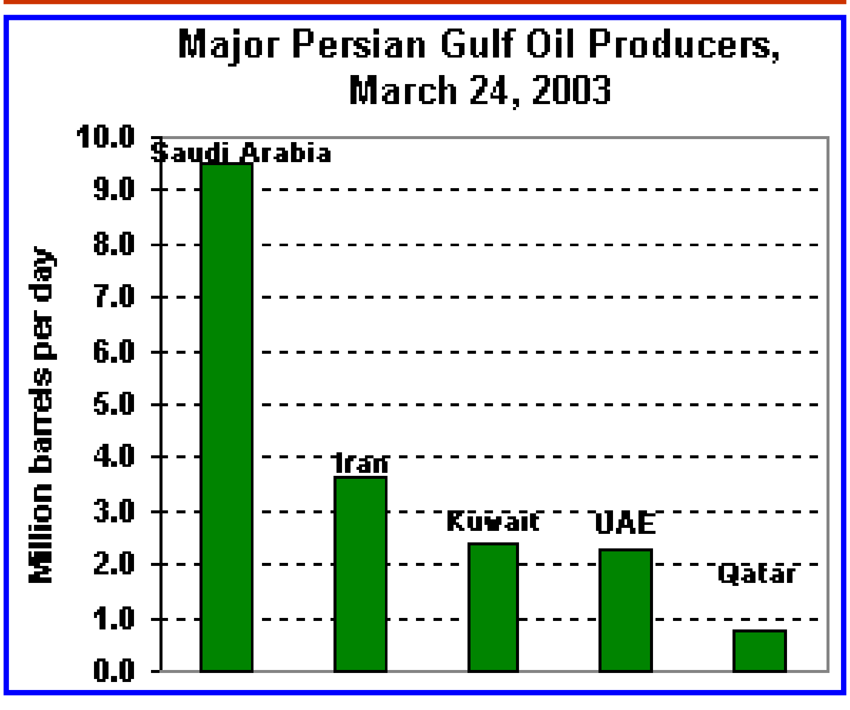
*Definitions

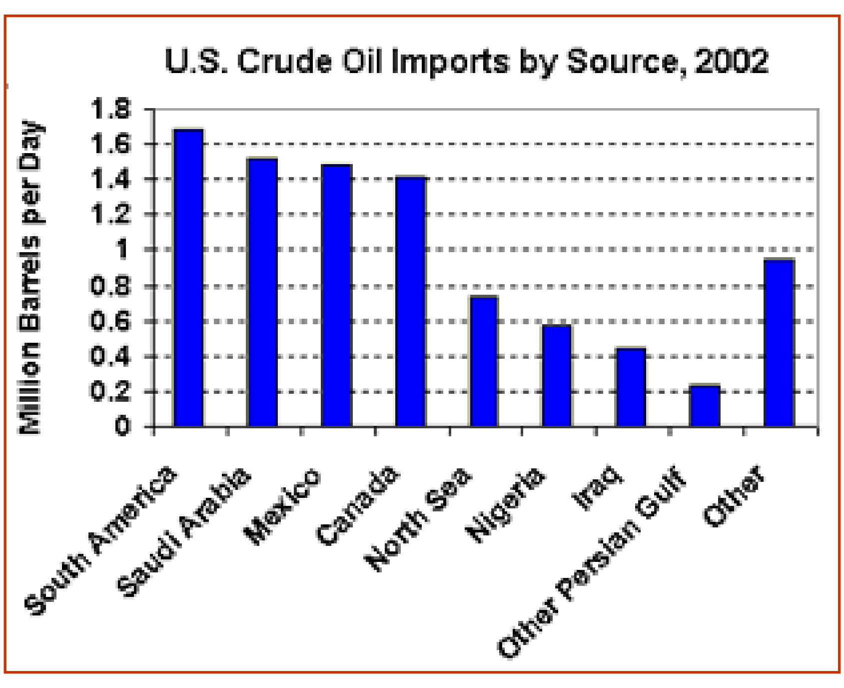












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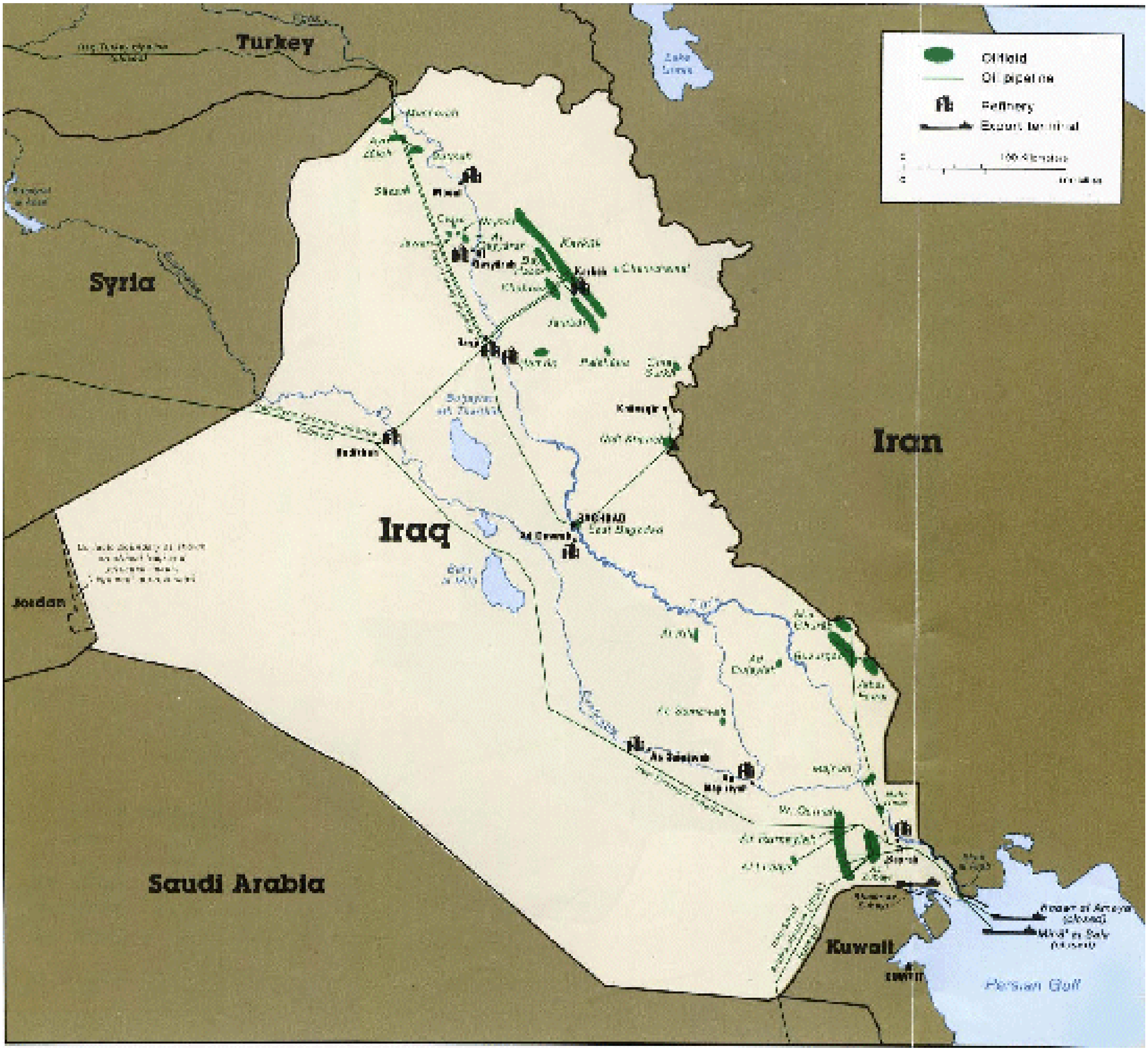
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Oil pipeline
Refinery
Export terminal
Turkey
Syria
Iran
Iraq
Jordan
Saudi Arabia
Kuwait
Persian Gulf
Kirkuk
BAGHDAD
East Baghdad
Basrah

Latest Oil Market Developments

(updated April 1, 2003)

The near-month (May) West Texas Intermediate (WTI) futures contract settled at $31.04 per barrel on Monday (3/31), up $0.88 per barrel from Friday, on concerns over the pace of the war in Iraq, as well as continued ethnic violence and a significant (800,000-barrels-per-day) oil supply disruption in Nigeria. Following weekend clashes in Nigeria's oil producing Niger Delta and Port Harcourt regions, anxieties have increased that the violence in Nigeria could worsen ahead of upcoming Presidential elections on April 19. Many oil traders also have begun to factor the possibility of a longer duration to the Iraq war into their thinking, and this has tended to put upward pressure on oil prices as well.

As of 7:45 am Tuesday, the near-month WTI futures contract was at $30.30 per barrel in overnight ACCESS trading, down $0.74 per barrel from yesterday's closing price, on news that Nigeria's largest union had canceled a strike scheduled to start today.

In U.S. product markets overnight, as of 7:45 am Monday, the near-month gasoline futures contract (which for the first time is the May 2003 contract) was at 93.90 cents per gallon, down 1.80 cents per gallon from yesterday's closing price for the May 2003 contract, while the near-month heating oil futures contract (which for the first time is the May 2003 contract) was at 75.07 cents per gallon, down 2.01 cents per gallon from yesterday's closing price for the May 2003 contract. Prices for both products are down in conjunction with the decrease in oil prices.

Despite increases over the past week, the WTI crude oil price remains down around 18% from the $37.83 per barrel level it reached on March 12. Oil prices had tumbled following President Bush's speech on March 17 concerning Iraq, and in general on the removal of uncertainty (the so-called "war premium") regarding possible war with Iraq. This uncertainty, along with a disruption in Venezuelan oil production earlier this year and cold weather this winter, had placed upward pressure on prices in recent months.

Outside the Persian Gulf, oil output continues to be below normal in Venezuela and Nigeria. In Nigeria, 800,000 barrels per day of production capacity remains shut in due to civil unrest in the Niger Delta, leaving 1.4 million barrels per day of output. In Venezuela, independent estimates of oil production range from 2.4 to 2.6 million barrels per day, compared to about 3 million barrels per day before the oil workers strike began in December 2002. Venezuela's largest refinery, the Paraguana complex, is set to resume exports of gasoline later this week, according to a PdVSA spokesman.

Other issues related to **world oil markets** include:

- Early Tuesday (4/1), Nigeria' largest union -- the Nigeria Labour Congress -- called off a planned 3-day strike that had been scheduled to start today. This announcement comes amidst continuing violence in Nigeria's Niger Delta, as well as its spread to the Port Harcourt area over the past several days. On Sunday (3/30) 100 people were reported missing after jumping into a river in the town of Bakana to avoid a stampede of armed militants. Ethnic unrest in Nigeria has caused multinational companies to shut in approximately 800,000 barrels per day of oil. Press reports have quoted oil industry analysts as saying that the Nigerian disruption could last into May, with elections scheduled for April 19.
- Iraq's Ambassador to Moscow, Abbas Khalaf, said today (4/1) that Baghdad opposed restarting the UN "Oil-for-Food" program given "any changes to the modality of the programme." On Friday (3/28), the UN Security Council had unanimously passed a resolution authorizing Secretary-General Kofi Annan to administer "Oil-for-Food" program funds for 45 days. The resolution does not deal with future Iraqi oil exports or arrangements for management of the Iraqi oil industry.
- U.S. and Kuwaiti oil well firefighters reportedly tried but failed on Monday (3/31) to extinguish the remaining two fires at oil wells in the southern Rumaila field. Water shortages and equipment failures were cited. The teams reportedly plan to try again today (4/1).
- "Technical problems" over the weekend along Iraq's oil pipeline from Kirkuk to the Turkish port of Ceyhan interrupted the flow of Iraqi oil according to press reports. Oil reportedly resumed flowing yesterday (3/31), but only at "a very low rate," given that storage facilities at Ceyhan reportedly are within 110,000 barrels of maximum capacity. On Monday (3/31) a senior Turkish energy official said, "The flow may halt in two or three days unless loading starts because tanks are about to fill." On Tuesday (4/1), market sources said that Iraq was pumping oil through the pipeline "during daylight."
- *Reuters* reported Monday (3/31) that, according to a Syrian oil industry source, Iraqi oil supplies (of Basra crude) to Syria had stopped for "technical" reasons. Over the past year or two, Iraq is generally believed to have smuggled around 150,000-200,000 barrels per day of oil outside the U.N. "Oil-for-Food" program via pipeline through Syrian territory. Syria consistently has denied that this was taking place. In related news, Syria's state oil company said Monday that it had cut the volume of its April oil exports by 10%.
- According to the Jordanian newspaper *Al-Dustur*, an Iraqi diplomat was claiming that Iraqi oil exports to Jordan had restarted on Sunday (3/30). This report could not be independently verified, however. Iraq's exports to Jordan via tanker truck reportedly were halted at the outset of the war on March 19.
- On Monday (3/31), White House spokesman Ari Fleischer said that there was "no change in the status of the Strategic Petroleum Reserve" since "we have seen no evidence to date of a severe supply disruption." Secretary of Energy Spencer Abraham added that "We are prepared to use the strategic reserve if we need to do so, if a severe disruption were to take place," but that to date, increased production by OPEC members besides Iraq has "more than...compensate[d] for losses in Iraq and Nigeria."
- OECD Secretary General Donald Johnston said Monday (3/31) that the global oil supply situation was adequate, "given that reserves have been built up," and that most likely "in the foreseeable future there is not going to be a demand-supply issue" for oil.
- Kurdish fighters have reportedly moved within 15 miles of the city of Kirkuk and the nearby oil fields, as Iraqi forces have retreated. "Kurdish militias are under the command and control of U.S. forces (and) they will not move anywhere without U.S. coalition leadership," U.S. envoy Zalmay Khalilzad told reporters after talks at Turkey's Foreign Ministry, according to *Reuters.*
- As of April 1, 2003, the U.S. Strategic Petroleum Reserve (SPR) contained 599.3 million barrels of oil. The SPR has a maximum drawdown capability of 4.3 million bbl/d for 90 days, with oil beginning to arrive in the marketplace 15 days after a presidential decision to initiate a drawdown. The SPR drawdown rate declines to 3.2 million bbl/d from days 91-120, to 2.2 million bbl/d for days 121-150, and to 1.3 million bbl/d for days 151-180.

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Latest Oil Supply Disruption Information

(updated April 1, 2003)

For the time being, EIA is assuming that the flow of Iraqi oil exports has been stopped for the most part. Combined with other lost oil production from Iran's Soroosh field, the gross Middle Eastern oil supply disruption is estimated at 1.9-2.0 million barrels per day (MMBD). Meanwhile, Nigeria is experiencing a gross oil supply disruption of about 800,000 barels per day. In total, around 2.7-2.8 million barrels per day of oil production from Iraq and Nigeria is currently offline, with remaining OPEC spare production capacity estimated at 0.9-1.4 MMBD.

Major Gross Oil Supply Disruptions (million barrels per day MMBD)

	3/19/03	Latest (4/1/03)
Middle East*	1.8	1.9-2.0
Nigeria	0.0	0.8
TOTAL	1.8	2.7-2.8

*The Middle Eastern gross oil supply disruption is based on the loss of Iraqi exports from the UN "oil-for-food" program, which averaged 1.73 MMBD in February 2003, plus around 200,000 barrels per day of "illegal" oil exports through Syria and Jordan, plus the loss of 0.06 MMBD resulting from Shell's shutdown of its Soroosh oil field in Iran's northern Gulf.

World Oil Supply

	Prior to Disruption March 2003 (Base Case)	Latest Estimate
OPEC-10 Production (MMBD)	25.3	26.0
Iraqi Production (MMBD)	2.3	N.A.
Surplus Capacity (MMBD)	1.5-2.0	0.9-1.4

Note: For a more detailed analysis of OPEC production prior to disruption, see EIA's OPEC Fact Sheet. For an overview of the Iraqi oil sector, see EIA's Iraq Country Analysis Brief.

Price Movements

Daily Price Information	Week Prior (3/12)	Day #1 (3/19)	Latest (3/31)
WTI Futures Price ($/bbl)	37.83	29.88	31.04
U.S. Weekly Price Survey	Monday Prior (3/17)	Week #1 (Monday 3/24)	Latest (Monday 3/31)
Retail Regular Gasoline (cents/gallon)	172.8	169.0	164.9

Note: EIA collects a national survey of regular retail gasoline prices every Monday. The current oil supply disruption is not the only factor affecting prices. For more information concerning EIA price statistics and analysis, see: This Week in Petroleum.

OPEC Crude Oil Production (Thousand barrels per day)

LAST UPDATED 3/31/03	November 2002 Production	March 2003 Production	Current Production	Current Production Capacity	Current Surplus Capacity
Algeria	938	1,100	1,100	1,100	0
Indonesia	1,100	1,050	1,050	1,050	0
Iran	3,500	3,670	3,640	3,690	50
Kuwait	1,940	2,400	2,400	2,400	0
Libya	1,350	1,370	1,370	1,400	30
Nigeria	2,000	1,800	1,400	1,400	0
Qatar	695	740	740	850	110
Saudi Arabia	8,100	9,500	9,500	10,000-10,500	500-1,000
UAE	2,000	2,300	2,300	2,500	200
Venezuela	2,922	2,300	2,500	2,500	0
OPEC 10 Crude Oil Total	**24,545**	**26,230**	**26,000**	**26,890-27,390***	**890-1,390**
Iraq	2,390	1,230	N.A.	N.A.	0
OPEC Crude Oil Total	**26,935**	**27,460**	**26,000**	**26,890-27,390***	**890-1,390**

NA: Not Applicable
1Crude oil does not include lease condensate or natural gas liquids.
2Quotas are based on crude oil production only.
3Maximum sustainable production capacity, defined as the maximum amount of production that: 1) could be brought online within a period of 30 days; and 2) sustained for at least 90 days.
4Kuwaiti and Saudi Arabian figures each include half of the production from the Neutral Zone between the two countries. Saudi Arabian production also includes oil produced from its offshore Abu Safa field on behalf of Bahrain.
5 The amount of Saudi Arabia's spare capacity that can be brought online is shown as a range between 0.5 and 1.0 million bbl/d.
6The UAE is a federation of seven emirates. The quota applies only to the emirate of Abu Dhabi, which controls the vast majority of the UAE's economic and resource wealth.
7Venezuelan capacity and production numbers exclude extra heavy crude oil used to produce Orimulsion. It has been estimated that it would take 4 months from the end of the current crisis for Venezuela to restore its pre-strike production capacity. Venezuelan production projections assume production remains at current levels.
8Iraqi oil exports are approved by the United Nations under the oil-for-food program for Iraq established by Security Council Resolution 986 (April 1995) and subsequent resolutions. As a result, Iraqi production and exports have not been a part of any recent OPEC agreements.
9Other liquids include lease condensate, natural gas liquids, and other liquids including volume gains from refinery processing.

Top World Oil Net Exporters, 2002*

	Country	Net Exports (million barrels per day)
1)	Saudi Arabia	6.76
2)	Russia	5.03
3)	Norway	3.14
4)	Iran	2.30
5)	Venezuela	2.26
6)	United Arab Emirates	1.95
7)	Nigeria	1.85
8)	Kuwait	1.73
9)	Mexico	1.69
10)	Iraq	1.58
11)	Algeria	1.27
12)	Libya	1.16

**Table includes all countries with net exports exceeding 1 million barrels per day in 2002.*

During 2002, roughly half of U.S. crude oil imports came from the Western Hemisphere (18% from Canada, 16% from South America, 12% from Mexico, 1% from the Caribbean), while approximately one-fifth came from the Persian Gulf region (15% from Saudi Arabia, 4% from Iraq, 2% from Kuwait).

In general, OECD Europe depends far more heavily on the Persian Gulf and North Africa for oil imports than does the United States. Japan receives over three-quarters of its oil supplies from the Persian Gulf (mainly the UAE, Saudi Arabia, Kuwait, Iran, and Qatar) with the remainder coming from Indonesia, China, and other sources.

Major Sources of U.S. Net Petroleum Imports, 2002*

(all volumes in million barrels per day)

	Total Net Oil Imports	Net Crude Oil Imports	Net Petroleum Product Imports
Canada	1.83	1.42	0.41
Saudi Arabia	1.55	1.52	0.03
Venezuela	1.37	1.20	0.17
Mexico	1.28	1.49	-0.21
Nigeria	0.60	0.57	0.03
United Kingdom	0.47	0.41	0.06
Iraq	0.44	0.44	0.00
Norway	0.38	0.34	0.04
Angola	0.33	0.32	0.01
Net Imports	10.38	9.04	1.34

** Table includes all countries from which the U.S. imported more than 300,000 barrels per day of total oil in 2002.*

Having provided this information, it is important to stress that oil is a "fungible" (interchangeable, traded on a world market) commodity, that a disruption of oil flows anywhere will affect the price of oil everywhere, and that the specific suppliers of oil to a particular country or region are not of enormous significance, at least from an economic point of view.

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Latest U.S. Weekly EIA Petroleum Information

(last complete update: March 27, 2003)

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Petroleum Inventories
With the high level of imports seen last week, U.S. commercial crude oil inventories (excluding those in the Strategic Petroleum Reserve) increased by 3.7 million barrels. However, with crude oil refinery inputs relatively unchanged, inventories for both major petroleum products were mixed. Distillate fuel inventories increased by 2.3 million barrels, with almost all of the increase in low-sulfur distillate fuel (diesel fuel). But, motor gasoline inventories fell by 2.1 million barrels last week and remain below the low end of the normal range. As of March 21, total commercial petroleum inventories are 124.9 million barrels less than last year at this time.

Propane Inventories Post Small Build
Last week’s modest stockbuild may have signaled the end of winter with U.S. inventories of propane gaining 0.8 million barrels to end the week of March 21, 2003 at an estimated 19.0 million barrels. The relatively small gain pushed inventories slightly above the Lower Operational Limit (LOI) that was previously breached for the first time ever on March 14, 2003. Moreover, the weekly stock gain spanned across all regions with inventories in the East Coast posting a 0.1 million barrel increase, while inventories in the Midwest showed a gain that was less than 0.1 million barrels last week. Inventories in the Gulf Coast showed the largest weekly gain of nearly 0.6 million barrels during this period. Nevertheless, if last week’s stockbuild marks the beginning of the spring/summer seasonal build that typically stretches through September, U.S. inventories of propane would require a stockbuild measuring more than 40 million barrels to reach the 60 million barrel level that most industry observers believe is adequate prior to the winter heating season.

Petroleum Imports
U.S. crude oil imports averaged nearly 9.7 million barrels per day last week, the largest amount since the week ending December 6, 2002 and the first week the average has exceeded 9 million barrels per day since the week ending December 20, 2002. Crude oil imports have averaged 8.7 million barrels per day over the last four weeks, which is barely above the level averaged over the same period last year. Although the origins of weekly crude oil imports are very preliminary and thus not published, imports from Venezuela last week seemed to have returned to normal levels for the first time since the week ending December 6, 2002. Total motor gasoline imports (including both finished gasoline and gasoline blending components) averaged 1 million barrels per day last week, while distillate fuel imports averaged 500,000 barrels per day.

Monthly data on the origins of U.S. crude oil imports in January 2003 has been released and it shows that three countries each exported more than 1.5 million barrels per day of crude oil to the United States (see table below). The top sources of U.S. crude oil imports in January 2003 were: Saudi Arabia (1.820 million barrels per day), Canada (1.621 million barrels per day), and Mexico (1.566 million barrels per day). This is the largest monthly amount of crude oil imported from Saudi Arabia since August 2001. Rounding out the top ten sources, in order, were Nigeria (0.798 million barrels per day), Iraq (0.600 million barrels per day), United Kingdom (0.411 million barrels per day), Venezuela (0.399 million barrels per day), Angola (0.245 million barrels per day), Kuwait (0.134 million barrels per day), and Colombia (0.120 million barrels per day). Imports from Venezuela were at their lowest level since February 1989, as Venezuelan exports were severely curtailed for much of the month following the general strike in that country. Total crude oil imports averaged 8.547 million barrels per day in January, a decline of nearly 100,000 barrels per day from December, and represents the lowest level since February 2000. The top three origins accounted for nearly 59 percent of these U.S. crude oil imports in January, while the top ten sources accounted for 90 percent of all U.S. crude oil imports.

Refinery Inputs and Production
U.S. crude oil refinery inputs fell slightly to 14.7 million barrels per day during the week ending March 21. Despite crude oil input to refineries remaining relatively flat, there were changes in the level of refinery production by product. Jet fuel production increased by about 100,000 barrels per day, while distillate fuel production fell by more than 200,000 barrels per day. Motor gasoline production remained relatively flat.

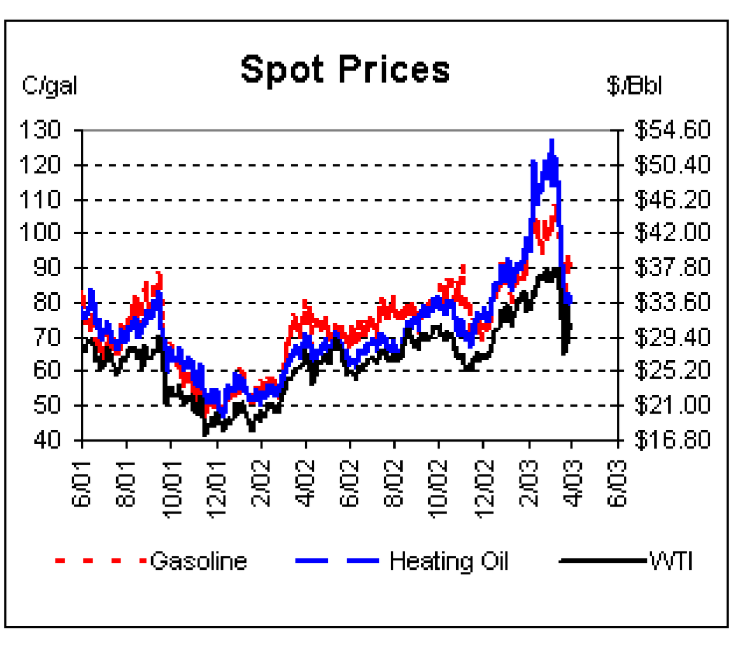
Petroleum Demand
Total product supplied over the last four-week period averaged 20.1 million barrels per day, or about 3.1 percent more than the same period last year. Over the last four weeks, motor gasoline demand is up 0.3 percent, and distillate fuel demand is up 11.9 percent compared to the same period last year. Kerosene-type jet fuel demand is 1.4 percent greater than last year over the latest four-week period.

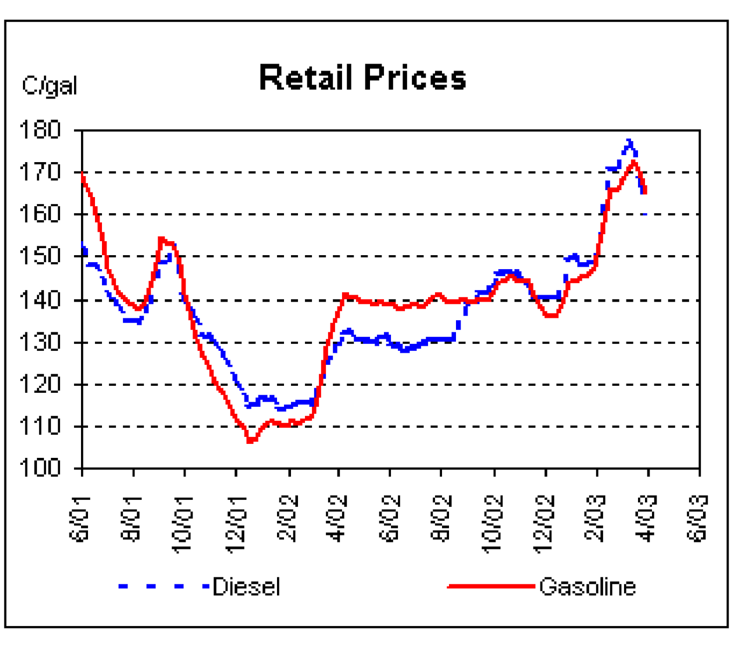
U.S. Retail Gasoline Price Decreases by Almost 4 Cents (updated April 1, 2003)
The U.S. average retail price for regular gasoline fell last week for the second week in a row. Prices dropped by 4.1 cents per gallon as of March 31 to hit 164.9 cents per gallon, which is still 27.8 cents per gallon higher than a year ago. This is the largest one-week price decrease since prices fell by 4.4 cents on October 22, 2001. The decline reflects, in part, the reduction in crude oil prices recently. Prices were down throughout the country, with the largest decrease occurring in the Midwest, where prices fell 7.4 cents to end at 152.4 cents per gallon. California prices remained above $2 per gallon for the fifth week in a row, decreasing to 213.0 cents per gallon.

Average prices for the West Coast also stayed above the $2 per gallon mark, at 202.1 cents per gallon on March 31. Retail diesel fuel prices decreased for the third consecutive week, falling 6.0 cents per gallon to a national average of 160.2 cents per gallon as of March 31. Recent price decreases can be largely attributed to increases in supply that have exceeded demand for diesel. Retail diesel prices were down throughout the country, with the largest price decrease occurring in the Midwest, where prices fell 7.0 cents per gallon to end at 152.6 cents per gallon. Prices in New England remained the highest in the nation, although they declined by 6.9 cents to 182.3 cents per gallon.

U.S. Petroleum Prices

(updated April 1, 2003)





Crude Oil and Oil Products Price Table

Date	WTI Crude Oil Spot Cushing	WTI Crude Oil Futures	Gasoline Spot NYH	Gasoline Futures	Heating Oil Spot NYH	Heating Oil Futures	Kerojet Spot NYH	Propane Spot Mt. Belvieu	Propane Spot Conway	EIA Weekly Retail US Average Gasoline	EIA Weekly Retail US Average Diesel
	$/bbl	$/bbl	cents per gallon		cents per gallon		c/gal	cents per gallon		cents per gallon	
2/11/2003	$35.43	$35.44	103.50	105.59	112.71	105.76	115.08	69.25	68.25		
2/12/2003	$35.83	$35.77	100.85	103.36	108.58	103.05	108.51	64.50	64.50		
2/13/2003	$36.63	$36.36	100.48	103.14	110.28	105.28	110.53	62.75	61.88		
2/14/2003	$36.61	$36.80	98.48	102.23	112.70	106.07	113.70	64.69	62.75		
2/17/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	166.0	170.4
2/18/2003	$36.88	$36.96	96.78	99.45	113.24	106.54	114.54	64.69	62.75		
2/19/2003	$37.02	$37.16	97.00	100.22	116.73	109.93	117.93	67.13	64.13		
2/20/2003	$36.45	$36.79	94.08	96.58	112.40	105.87	115.90	68.75	68.00		
2/21/2003	$36.76	$35.58	98.75	101.28	117.00	110.85	120.50	72.00	69.25		
2/24/2003	$37.29	$36.48	102.93	104.75	120.73	114.67	123.60	81.00	73.25	165.8	170.9
2/25/2003	$36.06	$36.06	98.48	100.78	115.50	112.26	119.25	94.50	81.50		
2/26/2003	$37.96	$37.70	99.63	101.83	119.00	115.49	122.75	105.00	87.50		
2/27/2003	$36.83	$37.20	99.40	101.80	117.90	115.43	120.40	110.50	101.00		
2/28/2003	$36.76	$36.60	101.20	103.77	122.25	125.59	124.50	127.50	89.50		
3/3/2003	$36.10	$35.88	102.05	109.48	126.88	103.60	127.75	77.44	70.25	168.6	175.3
3/4/2003	$36.95	$36.89	103.61	111.22	118.35	104.86	121.35	75.75	66.75		
3/5/2003	$36.86	$36.69	102.10	110.09	117.13	104.39	112.26	72.25	62.38		
3/6/2003	$37.21	$37.00	103.03	110.60	114.03	105.56	114.03	70.50	61.75		
3/7/2003	$37.76	$37.78	107.80	115.67	121.00	110.85	119.63	70.44	63.00		
3/10/2003	$37.18	$37.27	106.20	112.82	120.75	108.57	117.88	68.00	60.50	171.2	177.1
3/11/2003	$36.81	$36.72	103.70	109.87	116.60	103.02	114.10	65.38	58.25		
3/12/2003	$37.87	$37.83	105.08	111.39	115.45	103.52	112.45	64.50	57.38		
3/13/2003	$36.05	$36.01	99.38	105.77	106.84	96.71	103.84	62.50	54.94		
3/14/2003	$35.41	$35.38	98.75	104.04	102.30	94.07	98.55	60.13	53.25		
3/17/2003	$34.92	$34.93	95.97	102.71	95.70	91.57	92.95	61.63	56.50	172.8	175.2
3/18/2003	$31.55	$31.67	91.10	96.19	90.45	85.78	90.20	59.38	52.38		
3/19/2003	$30.01	$29.88	89.39	94.25	88.55	83.61	88.30	58.38	53.19		
3/20/2003	$28.62	$28.61	85.85	90.99	88.00	82.44	87.50	57.88	53.50		
3/21/2003	$27.18	$26.91	80.10	85.25	78.75	75.56	79.75	55.25	53.69		
3/24/2003	$29.51	$28.66	84.58	89.79	80.45	78.37	82.70	56.63	54.75	169.0	166.2
3/25/2003	$33.42	$27.97	83.25	88.49	75.85	73.49	76.85	57.00	54.75		
3/26/2003	$28.71	$28.63	88.75	92.42	75.55	74.41	76.05	55.38	53.25		
3/27/2003	$30.31	$30.37	92.75	97.47	81.00	81.15	81.75	54.75	52.07		
3/28/2003	$30.21	$30.16	91.05	95.39	82.08	83.25	83.70	52.63	51.82		
3/31/2003	$31.14	$31.04	90.92	94.44	79.62	79.24	80.12	51.82	49.94	164.9	160.2

Source: Spot and futures closing quotes as reported by Reuters News Service, retail prices reported by EIA

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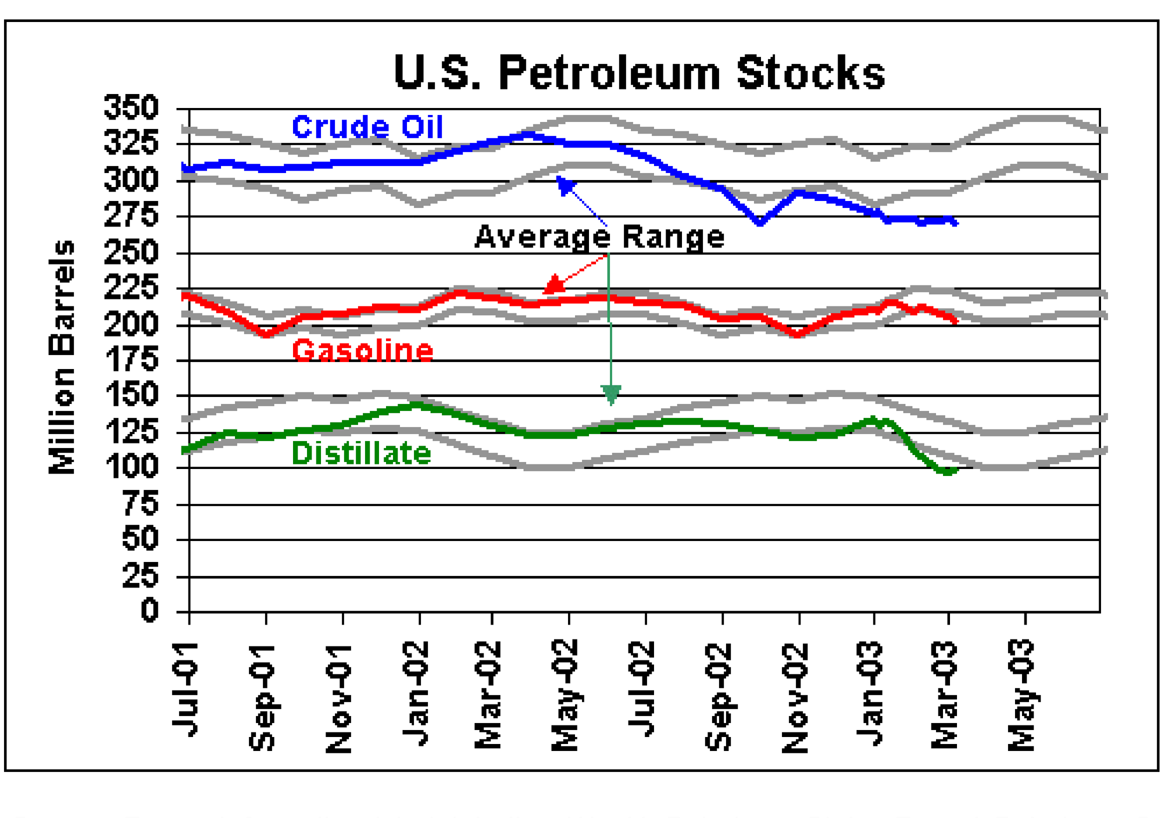
U.S. Petroleum Supply

(Thousand Barrels per Day)	Four Weeks Ending 3/14/2003	3/14/2002	vs. Year Ago Diff.	% Diff.
Refinery Activity				
Crude Oil Input	14,502	14,357	145	1.0%
Operable Capacity	16,800	16,785	15	0.1%
Operable Capacity Utilization (%)	87.3%	86.9%	0.4%	
Production				
Motor Gasoline	7,979	8,107	-128	-1.6%
Jet Fuel	1,416	1,474	-58	-3.9%
Distillate Fuel Oil	3,667	3,422	245	7.2%
Imports				
Crude Oil (incl. SPR)	8,330	8,646	-316	-3.7%
Motor Gasoline	769	767	2	0.2%
Jet Fuel	112	97	15	15.8%
Distillate Fuel Oil	522	235	287	122.4%
Total	10,901	10,856	45	0.4%
Exports				
Crude Oil	10	6	4	70.7%
Products	933	991	-58	-5.9%
Total	943	998	-55	-5.5%
Products Supplied				
Motor Gasoline	8,664	8,642	22	0.3%
Jet Fuel	1,472	1,544	-72	-4.7%
Distillate Fuel Oil	4,343	3,730	613	16.4%
Total	20,083	19,494	589	3.0%

Stocks (Million Barrels)	3/14/2003	3/14/2002	vs. Year Ago Diff.	% Diff.
Crude Oil (excl. SPR)	270.2	328.8	-58.6	-17.8%
Motor Gasoline	201.1	216.2	-15.1	-7.0%
Jet Fuel	39.5	41.3	-1.8	-4.4%
Distillate Fuel Oil	97.2	127.1	-29.9	-23.5%
Total (excl. SPR)	882.2	1,013.4	-131.2	-12.9%



Source: Energy Information Administration, Weekly Petroleum Status Report, Petroleum Supply Monthly.

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File last modified: April 1, 2003

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Energy Situation Analysis Report: Special Topic Reports

- The War’s Impact on Gasoline Prices An analysis of the Iraq war's impact on U.S. gasoline prices, and the dynamics between crude and product prices. (*March 25, 2003*)
- Key Iraqi Oil Infrastructure Information (*March 24, 2003*)
A summary of the most important information related to Iraq's oil reserves, oil fields, wells, production capacity, export infastructure, refiining sector, and post-war development plans.
- Oil Market Status Prior to Iraq Disruption *(March 20, 2003)*
An overview of the world oil situation prior to the current warfare in Iraq. Attempts to answer the question: "how did we get to this point, and what may happen next?"
- Past Oil Supply Disruptions (*March 18, 2003*)
A historical review of major past oil supply disruptions, including the 1973 Arab oil embargo, the 1979 Iranian Revolution, the 1980 outbreak of the Iran-Iraq War, and the 1990-1991 Gulf War.
- Basic Facts on Venezuela (*December 17, 2002*)
A fact sheet on Venezuela, providing historical oil production and export information, as well as a table showing US dependency on Venezuelan oil imports.

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Historical Comparison: Iranian Revolution (10/78)

Historical Comparison: Iran/Iraq War Outbreak (9/80)

Historical Comparison: Gulf War Outbreak (8/90)

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Special Topics: The War's Impact on Gasoline Prices (March 25, 2003)

As of Monday, March 24, EIA's weekly survey of retail gasoline prices showed the U.S. average price for regular grade at $1.690 per gallon, down from $1.728 per gallon the previous week, the highest nominal (not inflation-adjusted) national average price on record. With prices this high, and months to go before the summer driving season (traditionally the time of highest gasoline demand and prices), many people are understandably concerned about the potential impact on gasoline prices of the war in Iraq. Some also note the wide variations in crude oil and wholesale gasoline prices from week to week, or even day to day, and wonder how quickly increases (or reductions) can be expected to show up at the pump.

The effect of the war on prices for crude oil and petroleum products, including gasoline, is likely to depend mostly on how events unfold, particularly in terms of the scope and duration of any interruption to world oil supplies. The commencement of military action has to date affected oil production only in and near the combat region. For the time being, EIA is assuming that the flow of legal Iraqi oil exports has been effectively stopped. Kuwait has reportedly reduced production at certain northern oil facilities, but offset this with increases elsewhere, yielding no net change. Iran has reportedly shut in production from its offshore Soroosh field in the Persian Gulf. In total, the gross Middle Eastern oil supply disruption is estimated at 1.8 million barrels per day (MMBD). (This estimate is prior to excess production capacity being brought online by other countries). At present, promises of increased supplies from OPEC, especially Saudi Arabia, appear to be perceived by markets as sufficient to offset the temporary loss of Iraqi (and some Kuwaiti and Iranian) production, as evidenced by price movements to date. In fact, after rising nearly 50 percent since mid-November 2002, reflecting both tight global supplies and uncertainty over the possibility of war, prices fell as much as $10 per barrel in just over a week leading up to, and including, the first few days of battle.

In addition to the war in Iraq, other events continue to have substantial impact on world oil markets. Oil exports from Venezuela, a major exporter and OPEC member, remain at reduced levels as that country continues to recover from a general strike that began in early December 2002. Though official and unofficial estimates vary, Venezuelan production continues to run as much as 600,000 barrels per day lower than pre-strike levels. More recently, civil unrest in portions of Nigeria has reduced crude oil production from that OPEC member country by about 900,000 barrels per day. Problems in both of these countries have disproportionate effects on the United States, because they are among the relatively "short-haul" Atlantic Basin crude oil sources favored by refiners on the U.S. East and Gulf Coasts.

Higher crude oil prices exert upward influence on gasoline prices in two ways: a direct pass-through to all petroleum products, because crude oil is the primary feedstock to refineries; and inflation of refinery margins, because of the secondary effects of crude oil prices on refinery economics. Increases or decreases in crude oil prices, which are dependent on global supply and demand, translate almost instantly into changes in wholesale petroleum product prices, particularly in the spot and futures markets. (Each $1-per-barrel change in crude oil prices equates to a change in product prices of about 2.4 cents per gallon).

The other major component of gasoline price changes impacted by crude oil is refining margins, the difference between product prices and crude oil prices. When the supply/demand balance for a product is tighter than that for crude oil, refining margins are pushed higher. The balance can tighten because of rising demand, reduced production or imports, or a combination of these. This has recently been the case due to low U.S. crude oil inventories, which have begun to constrain refinery runs, in addition to reduced gasoline imports related to the Venezuelan strike. Additionally, high crude oil prices are often accompanied by "backwardation" in futures markets, where prices for commodities to be delivered in later months are lower than those for immediate delivery. Such a situation provides a disincentive for refiners to purchase and refine high-priced crude oil now, to be delivered as lower-priced products later.

The two components discussed above, crude oil prices and refining margins, add up to the spot market price of gasoline. Changes in spot prices are passed through to retail prices over a period of weeks, with about two-thirds of the impact of spot price changes arriving at the retail level within two weeks. Thus, unless counteracted by other influences more specific to gasoline, changes in crude oil prices can be expected to show up in retail gasoline prices, at the rate of about 2½ cents per gallon of gasoline for each $1 per barrel in crude oil price, within a matter of weeks. Because this "pass-through" of price changes from crude oil to wholesale and then retail gasoline markets is relatively consistent, EIA has found that near-term retail gasoline prices can be predicted with accuracy using recent spot price data.

When will last week's $10-per-barrel drop in crude oil prices show up at the gasoline pump? The answer lies in the lagging nature of price pass-through, and is not as simple as it may sound. Because the impact of a sudden change in spot prices is passed through to retail markets over a period of weeks, there can often be conflicting influences being passed through at the same time, especially when wholesale prices have quickly reversed direction. The current situation is a perfect case in point: gasoline spot prices had only peaked two weeks ago, so a portion of last week's sharp spot price decline, along with a lagging part of the previous increase, were both contributing to retail price movements this week. As a result, the downward movement was partially offset by the upward, yielding a net retail price decline of 3.8 cents per gallon for the week (note: this refers to the national average retail price for regular gasoline; prices can vary considerably on a regional basis because of differing logistical costs and product specifications).

Although it is impossible to predict spot market behavior over the coming weeks, it is likely that we will continue to see some conflicting influences on retail gasoline prices as the spring proceeds.

File last modified: March 25, 2003

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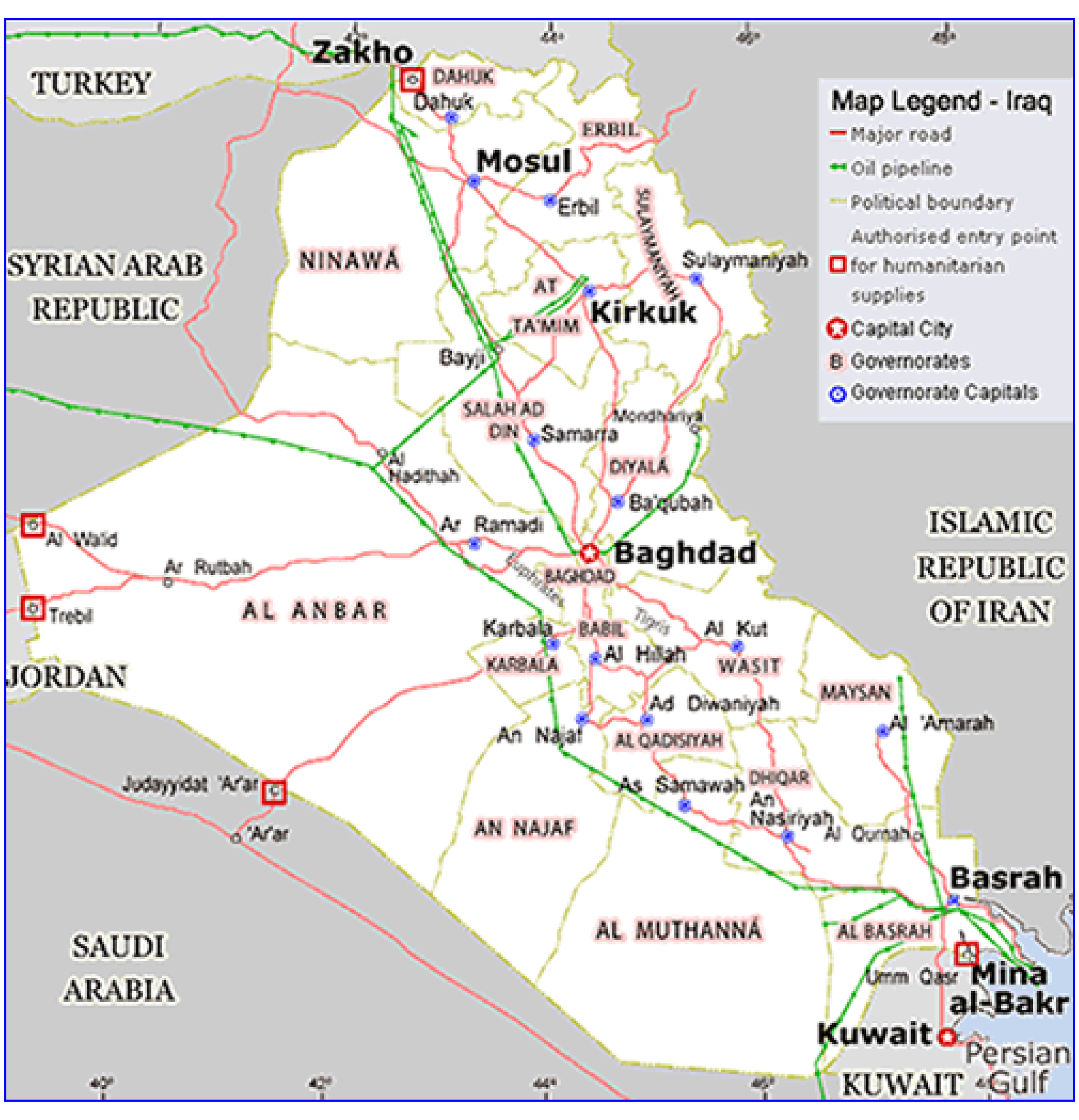
Special Topics: Key Iraqi Oil Infrastructure Information
(March 23, 2003)



Iraq's Oil Reserves, Fields, Wells
Iraq contains 112 billion barrels of proven oil reserves, the second largest in the world (behind Saudi Arabia). Iraq's true resource potential may be far greater than this, however, as the country is largely (90% or so) unexplored due to years of war and sanctions. Deep oil-bearing formations located mainly in the vast Western Desert region, for instance, could yield large additional oil resources (possibly another 100 billion barrels), but have not been explored. Iraq's oil production costs are amongst the lowest in the world, making it a highly attractive oil prospect. However, only 15 of 73 discovered fields have been developed, while few deep wells have been drilled compared to Iraq's neighbors.

Overall, only about 2,000 wells reportedly have been drilled in Iraq (of which about 1,500-1,700 are actually producing oil), compared to around 1 million wells in Texas for instance. In addition, Iraq generally has not had access to the latest, state-of-the-art oil industry technology (i.e., 3D seismic), sufficient spare parts, and investment in general throughout most of the 1990s, but has instead reportedly been utilizing questionable engineering techniques (i.e., overpumping, water injection/"flooding") and old technology to maintain production.

Iraqi oil reserves vary widely in quality, with API gravities in the 22º to 35º range. Iraq's main export crudes come from the country's two largest active fields: Rumaila and Kirkuk. The southern Rumaila field, which extends a short distance into Kuwaiti territory, has around 663 wells and produces three streams: Basra Regular; Basra Medium (normally 30º API, 2.6% sulfur); and Basra Heavy (normally 22º-24º API, 3.4% sulfur). Basrah Blend normally averages around 32º API, 1.95% sulfur, but reportedly is worse currently at around 29-30º API and 2%+ sulfur content. As of March 23, 2003, around 9 oil wells at Rumaila reportedly were on fire, with firefighters reportedly dispatched to deal with the problem, and outside analysts describing the problem as "minor" in nature.

The northern Kirkuk field, first discovered in 1927, has around 337 wells and normally produces 35º API, 1.97% sulfur crude, although the API gravity and sulfur content both are reported to have deteriorated sharply in recent months. Kirkuk's gravity, for instance, has declined to around 32-33º API, while sulfur content has risen above 2%. Declining crude oil qualities -- and an increased "water cut" as well -- could be the result of overpumping as Iraq attempts to sell as much oil as possible. An additional export crude, known as "Fao Blend," is heavier and more sour, with a 27º API and 2.9% sulfur. As of March 23, 2003, no oil well fires or other damage had been reported at Kirkuk.

Iraq's Pre-War Production and Export Capacity
Oil industry experts generally assess Iraq's sustainable production capacity at no higher than about 2.8-2.9 million bbl/d, with net export potential of around 2.3-2.5 million bbl/d (including smuggled oil). In comparison, Iraq produced 3.5 million bbl/d in July 1990. Approximately 2 million bbl/d of Iraq's production capacity comes from oil fields in the southern part of the country, particularly North and South Rumaylah (1.3 million bbl/d), West Qurnah (225,000 bbl/d), Az Zubair (220,000 bbl/d), Majnoon (50,000 bbl/d), Jabal Fauqi (50,000 bbl/d), Abu Ghurab (40,000 bbl/d), Buzurgan (40,000 bbl/d) and Luhais (30,000 bbl/d). Iraq's remaining oil production capacity is located in the northern and central fields of Kirkuk (720,000 bbl/d), Bai Hassan (100,000 bbl/d), Jambur (50,000 bbl/d), Khabbaz (40,000 bbl/d), Saddam (30,000 bbl/d), East Baghdad (20,000 bbl/d), and 'Ayn Zalah (10,000 bbl/d).

Iraq's Oil Export Pipelines/Terminals
Iraq's oil export infrastructure (pipelines, ports, pumping stations, etc.) were damaged in both the Iran-Iraq War as well as Operation Desert Storm (1991). Currently, the 600-mile, 40-inch Kirkuk-Ceyhan pipeline is Iraq's largest operable crude export pipeline. This Iraq-Turkey link consists has a fully-operational apacity of 1.1 million bbl/d, but reportedly can handle only around 900,000 bbl/d currently. A second, parallel, 46-inch line has an optimal capacity of 500,000 bbl/d and was designed to carry Basra Regular exports, but at last report was inoperable. Combined, the two parallel lines have an optimal capacity of 1.5-1.6 million bbl/d. According to *Reuters,* as of March 23, 2003, the Kirkuk-Ceyhan pipeline was operational and still pumping oil, but storage tanks at Ceyhan were nearly full and no tankers were scheduled to load.

On August 20, 1998, Iraq and Syria (which reopened their border in June 1997 -- after a 17-year closure -- for trade and official visits) signed a memorandum of understanding for the possible reopening of the 50-year-old, rusting Banias oil pipeline from Iraq's northern Kirkuk oil fields to Syria's Mediterranean port of Banias (and Tripoli, Lebanon). As of October 2002, the pipeline reportedly was being used (see above), and there also was talk of building a new, parallel pipeline as a replacement.

In order to optimize export capabilities (i.e., to allow oil shipments to the north or south), Iraq constructed a reversible, 1.4-million bbl/d "Strategic Pipeline" in 1975. This pipeline consists of two parallel 700,000-bbl/d lines. The North-South system allows for export of northern Kirkuk crude from the Persian Gulf and for southern Rumaila crudes to be shipped through Turkey. During the Gulf War, the Strategic Pipeline was disabled after the K-3 pumping station at Haditha as well as four additional southern pumping stations were destroyed.

In the Persian Gulf, Iraq has three tanker terminals: at Mina al-Bakr; Khor al-Amaya; and Khor az-Zubair (which mainly handles dry goods and minimal oil volumes). All of these ports, as well as other oil infrastructure (tanks, pipelines, etc.) in the area, reportedly were undamaged and under the control of coalition forces within the first few days of war in late March 2003. Mina al-Bakr is Iraq's largest oil terminal, with four 400,000-bbl/d-capacity, offshore berths capable of handling very large crude carriers (VLCCs). Gulf War damage to Mina al-Bakr appears to have been repaired in large part and the terminal currently can handle up to 1.2-1.3 million bbl/d. A full return to Mina al-Bakr's nameplate capacity apparently would require extensive infrastructure repairs. Mina al-Bakr also is constrained by a shortage of storage and oil processing facilities, most of which were destroyed in the Gulf War.

Iraq's Khor al-Amaya terminal was heavily damaged during the Iran-Iraq War (and completely destroyed during Operation Desert Storm in 1991) and has been out of commission since then. As of March 2001, reports indicated that Iraq had largely completed repairing two berths at Khor al-Amaya. Upon full completion of repairs, Iraq projects Khor al-Amaya's capacity will rise to 1.2 million bbl/d, and will help prevent delays at Mina al-Bakr while repairs are conducted there.

Post-War Oil Development Plans, **Pre-War Oil Deals with International Oil Companies**
In December 2002, the Council of Foreign Relations and the Baker Institute released a report on Iraq's oil sector. Among other things, the report concluded that: 1) Iraq's oil sector infrastructure is in bad shape at the moment, being held together by "band-aids," and with a production decline rate of 100,000 bbl/d per year; 2) increasing Iraqi oil production will require "massive repairs and reconstruction...costing several billions of dollars and taking months if not years;" 3) costs of repairing existing oil export installations alone would be around $5 billion, while restoring Iraqi oil production to pre-1990 levels would cost an additional $5 billion, plus $3 billion per year in annual operating costs; 4) outside funds and large-scale investment by international oil companies will be needed; 5) existing oil contracts will need to be clarified and resolved in order to rebuild Iraq's oil industry, with any "prolonged legal conflicts over contracts" possibly "delay[ing] the development of important fields in Iraq;" and 6) any "sudden or prolonged shut-down" of Iraq's oil industry could result in long-term reservoir damage; 7) Iraq's oil facilities could easily be damaged during any domestic unrest or military operations (in early February 2003, the Patriotic Union of Kurdistan claimed that Iraqi soldiers were mining oil wells in the north of the country in anticipation of war); and 8) given all this, a "bonanza" of oil is not expected in the near future.

According to the Middle East Economic Survey (MEES), problems at Iraqi oil fields include: years of poor oil reservoir management; corrosion problems at various oil facilities; deterioration of water injection facilities; lack of spare parts, materials, equipment, etc.; damage to oil storage and pumping facilities; and more. MEES estimates that Iraq could reach production capacity of 4.2 million bbl/d within three years at a cost of $3.5 billion, and 4.5-6.0 million bbl/d within seven years.

As of October 2002, Iraq reportedly had signed several multi-billion dollar deals with international oil companies (IOCs), mainly from China, France, and Russia. Deutsche Bank estimates $38 billion total on new fields -- "greenfield" development -- with potential production capacity of 4.7 million bbl/d if all the deals come to fruition (which Deutsche Bank believes is highly unlikely). Iraq reportedly has become increasingly frustrated at the failure of these companies actually to begin work on the ground, and has threatened to no longer sign deals unless firms agreed to do so without delay. Iraqi upstream oil contracts generally require that companies start work immediately, but U.N. sanctions overwhelmingly have dissuaded companies from doing so. In 1992, Iraq announced plans to increase its oil production capacity to over 6.3 million bbl/d following the lifting of U.N. sanctions. This plan, which was to be accomplished in three phases over a five-year period, assumed billions of dollars worth of foreign investment. Much of the production was to come from giant fields in the south (Halfaya, Majnoon, Bin Umar, West Qurna), plus the Mishrif reservoir (Luhais, North and South Rumaila, Zubair, etc.), East Baghdad, and others.

Russia, which is owed billions of dollars by Iraq for past arms deliveries, has a strong interest in Iraqi oil development. This includes a $3.7 billion, 23-year deal to rehabilitate Iraqi oilfields, particularly the 11-15 billion barrel West Qurna field (located west of Basra near the Rumaila field). West Qurna is believed to have production potential of 800,000-1 million bbl/d. In a surprising and somewhat puzzling development, in mid-December 2002 the Iraqi Oil Ministry announced that it was severing its contract with the Lukoil consortium on West Qurna due to "fail[ure] to comply" with contract stipulations. Specifically, the Iraqis cited Lukoil's failure to invest a required $200 million over three years. Two other, smaller, stakes in West Qurna by Russian companies Zarubezhneft and Mashinoimport reportedly were left intact. In addition, three exploration and production deals were signed between Iraq and Russian companies (Soyuzneftegaz, Stroytransgas-Oil, and Tatneft, to develop the 100,000-bbl/d Rafidain field, the Western Desert's Block 4, and the Western Desert's Block 9, respectively). Despite all this, Russia's Foreign Ministry said that it viewed the Iraqi decision on Lukoil and West Qurna "with regret." In mid-February 2003, following a month of talks between the two sides aimed at reversing Iraq's decision, the Iraqis announced that its decision to cancel the Lukoil deal was "finished and the contract has been scrapped."

In October 2001, a joint Russian-Belarus oil company, Slavneft, signed a $52 million service contract with Iraq on the 2-billion-barrel, Suba-Luhais field in southern Iraq. Full development of Suba-Luhais could result in production of 100,000 bbl/d (35º API) at a cost of $300 million over three years. As of March 2002, Slavneft reportedly was awaiting approval from the United Nations to drill 25 wells as Luhais.

The Saddam field contains 3 billion barrels of oil and 5 trillion cubic feet (Tcf) of associated gas. Iraq is seeking foreign assistance for a second-phase Saddam development, which would raise oil production capacity to 50,000 bbl/d, as well as 300 Mmcf/d of gas. In early April 2001, Russia's Zarubezhneft received U.N. approval to drill 45 wells in the Saddam field, plus Kirkuk and Bai Hassan, as part of an effort to reduce water incursion into the fields.

The largest of Iraq's oilfields slated for post-sanctions development is Majnoon, with reserves of 12-30 billion barrels of 28-35º API oil, and located 30 miles north of Basra on the Iranian border. The oil major Total reportedly has a deal with Iraq on development rights for Majnoon. Majnoon was reportedly brought onstream (under a "national effort" program begun in 1999) in May 2002 at 50,000 bbl/d, with output originally projected to reach 100,000 bbl/d by the end of 2002 (according to Oil Minister Rashid). Future development on Majnoon ultimately could lead to production of 450,000 bbl/d within two years or so at an estimated (according to Deutsche Bank) cost of $4 billion. Eventually, Majnoon could produce significantly more oil than that, possibly well above 1 million bbl/d.

In July 2001, angered by France's perceived support for the U.S. "smart sanctions" plan, Iraq announced that it would no longer give French companies priority in awarding oil contracts, and would reconsider existing contracts as well. Iraq also announced that it was inclined to favor Russia, which has been supporting Iraq at the U.N. Security Council, on awarding rights to Majnoon and another large southern oil field, Bin Umar. As of February 2003, Russian company Zarubezhneft reportedly was negotiating a contract to develop Bin Umar. The status of TotalFinaElf, which had previously expressed interest in the field, was not clear. In February 2003, TotalFinaElf said that it was confident regarding its Majnoon contract, regardless of the Iraqi government in power.

The 2.5-5 billion-barrel Halfaya project is the final large field development in southern Iraq. Several companies (BHP, CNPC, Agip) reportedly have shown interest in Halfaya, which ultimately could yield 200,000-300,000 bbl/d in output at a possible cost of $2 billion.

Smaller fields with under 2 billion barrels in reserves also are receiving interest from foreign oil companies. These fields include Nasiriya (Eni, Repsol), Tuba (ONGC, Sonatrach, Pertamina), Ratawi (Shell, Petronas, CanOxy), Gharaf (Mashinoimport, Rosneftegasexport), Amara (PetroVietnam), Noor (Syria), and more. Italy's Eni and Spain's Repsol appear to be strong possibilities to develop Nassiriya

Iraq's Refining Sector
Iraq's refining capacity as of January 2003 was believed to be over 417,000 bbl/d, compared to a pre-Gulf War, nameplate capacity of 700,000 bbl/d. Iraq has 10 refineries and topping units. The largest are the 150,000-bbl/d Baiji North, 140,000-bbl/d (or higher) Basra, and 100,000-bbl/d Daura plants. During the Gulf War, both Baiji in northern Iraq as well as the refineries at Basra, Daura, and Nasiriyah were severely damaged. Today, a lack of light-end products, low quality gasoline, and rising pollution levels because of a lack of water treatment facilities are some problems faced by Iraq's refining sector. Post-sanction plans had included attracting hundreds of millions of dollars worth of foreign investment in order to upgrade dozens of downstream (refining, pipelines, natural gas processing) facilities. Also, Iraq had planned to build a new $1 billion, 290,000-bbl/d "Central" refinery near Babylon.

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File last modified: March 23, 2003

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Definitions

Petroleum

WTI – West Texas Intermediate (for the purposes of this table, prices provided are near month futures price) Cushing OK.

Bbl – Barrel (42 gallons).

C's – cents.

Natural Gas

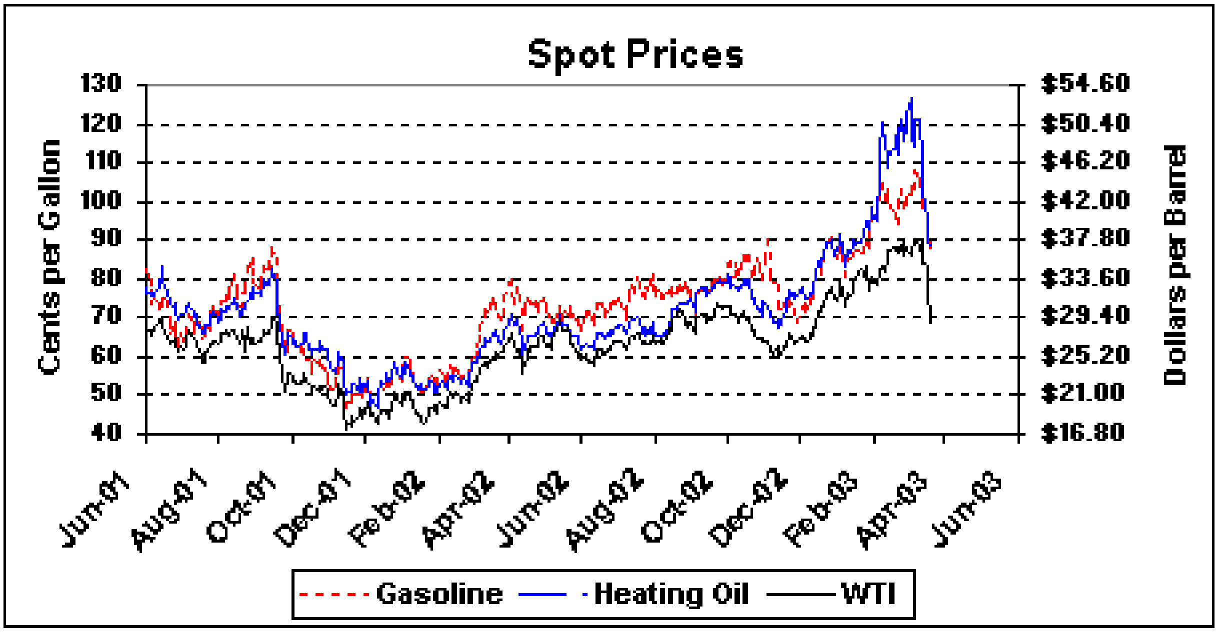
Henry Hub – A pipeline hub on the Louisiana Gulf coast. It is the delivery point for the natural gas futures contract on the New York Mercantile Exchange (NYMEX).

Electricity

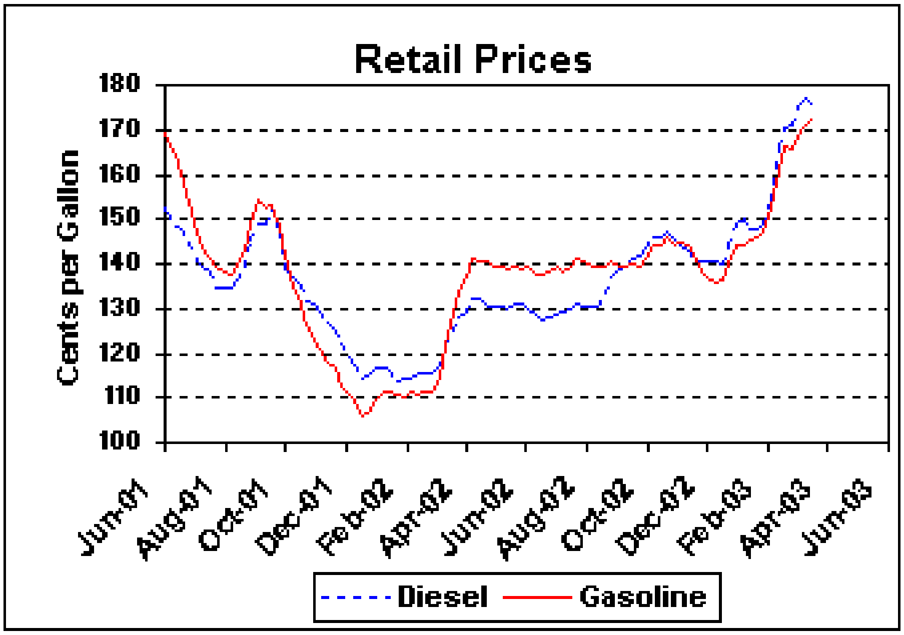
COB – average price of electricity traded at the California-Oregon and Nevada-Oregon border.

Palo Verde - average price of electricity traded at Palo Verde and West Wing Arizona.

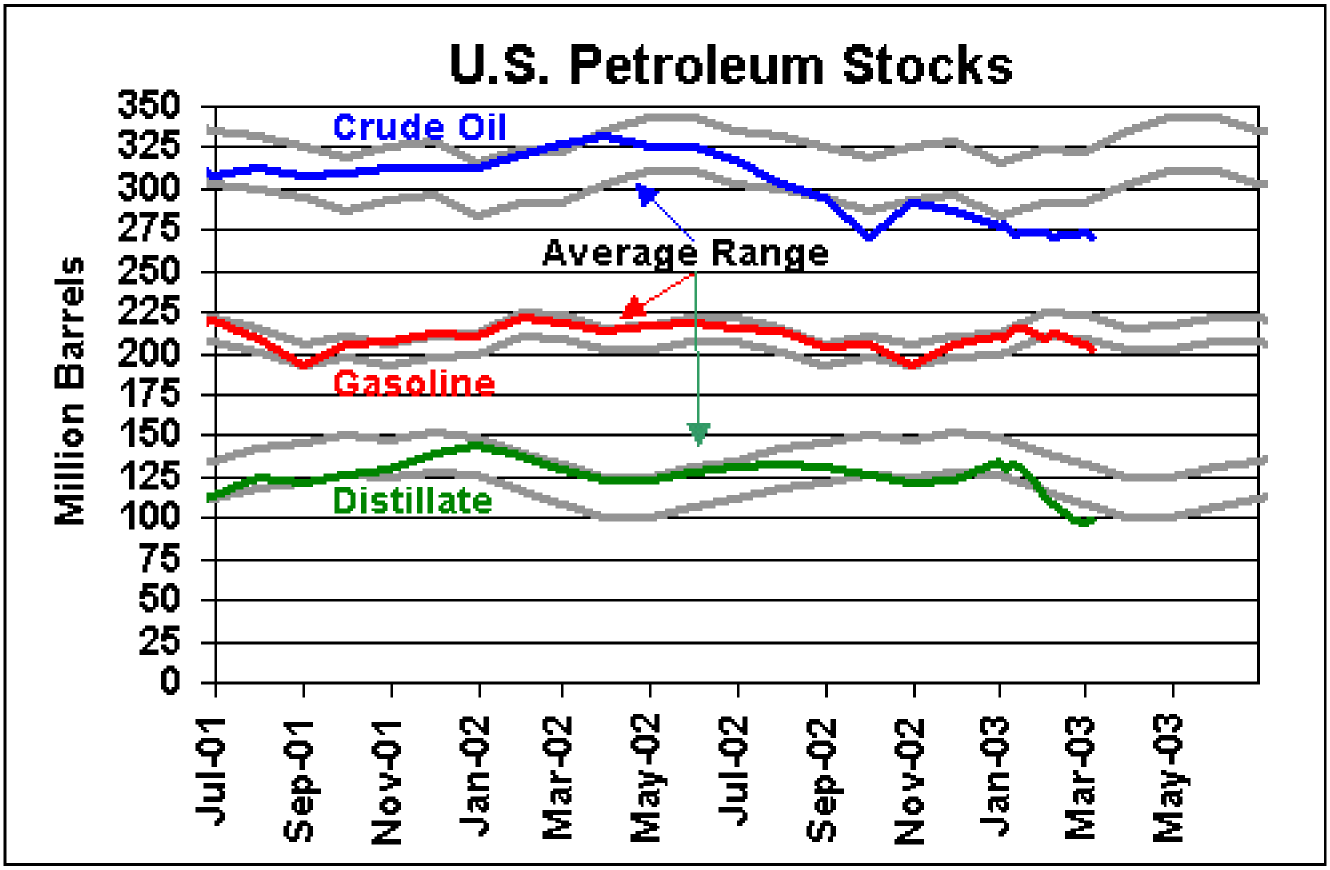
Average - average price of electricity traded at all locations.



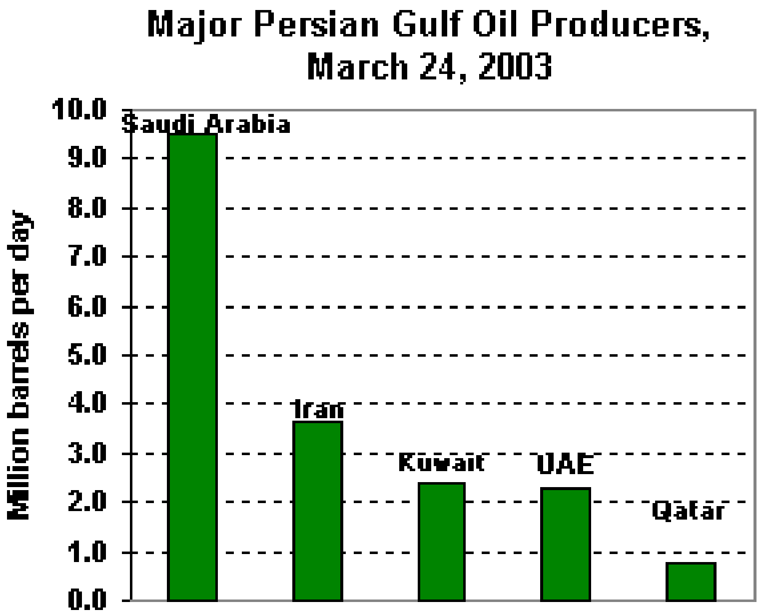
Source: Closing quote as reported by Reuters News Service



Source: Energy Information Administration (EIA)



Source: Energy Information Administration, Weekly Petroleum Status Report, Petroleum Supply Monthly.


Major Persian Gulf Oil Producers,
March 24, 2003
Million barrels per day
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Saudi Arabia
Iran
Kuwait
UAE
Qatar